

REMARKS

Claims 1 and 30 have been amended. Claim 40 is new. Claims 1-14 and 30-40, are currently pending in this application.

Claim Objections

Claim 7 has been objected to under 37 CFR §1.75(c) for failure to further limit a parent claim under MPEP 2106.01 as not having a functional relationship with the substrate. In response to the objection, it is respectfully noted that MPEP 2106.01 provides:

Nonfunctional descriptive material may be claimed in combination with other functional descriptive multi-media material on a computer-readable medium to provide the necessary functional and structural interrelationship to satisfy the requirements of 35 U.S.C. 101. The presence of the claimed nonfunctional descriptive material is not necessarily determinative of nonstatutory subject matter. For example, a computer that recognizes a particular grouping or sequence of musical notes read from memory and thereafter causes another defined series of notes to be played, requires a functional interrelationship among that data and the computing processes performed when utilizing that data. As such, a claim to that computer is statutory subject matter because it implements a statutory process.

When read in its entirety, claim 7 contains the following limitations:

if the owner field indicates that the first data entity is not currently leased, the first computing entity writing to the owner field in the file system to indicate an assumption of a lease of the first data entity . . .

wherein the owner field indicates that the first data entity is not currently leased when the owner field contains a value of zero.

As such, claim 7 requires a functional interrelationship among the data contained in the owner field and the computer process performed when utilizing that data; i.e. in claim 7, when the owner field contains a value of zero, the first computing entity writes to the owner field in the file system to indicate an assumption of a lease of the first data entity. Therefore, claim 7 meets the criteria set forth in MPEP 2106.01 and it is respectfully requested that the objection be reconsidered and withdrawn.

Claim Rejections

Claims 1-3, 5-7, 9, 11, 14, 30-35, and 38, have been rejected under 35 USC §102(e) as being anticipated by Guthridge et al. (7,124,131 B2) (“Guthridge”). Claims 4, 8, 10, 12, 13, 36, 37, and 39 have been rejected under 35 USC §103(a) as being unpatentable over Guthridge in view of other references. These rejections are respectfully traversed.

Claim 1 has been amended to clarify that the present invention recites “the first computing entity attempting to obtain a lease for itself on the first data entity without needing another computing entity acting on its behalf.” Claim 30 has been amended to clarify that the present invention recites “the first computing entity attempting to access a first data entity without needing another computing entity acting on its behalf, reading, using a processor, an owner field included in the file system that can be used to determine whether the first data entity is in use by a computing entity and determining whether the first data entity is in use by a computing entity.” The amendments to the claims shall not be construed as an admission of the unpatentability of the previously presented claims.

Guthridge describes a method and system for asserting a lock in a distributed file system. (Guthridge at Abstract.) In the background section, Guthridge notes that “[i]n opening the contents of an existing file object on the storage media in the SAN [Storage Area Network], a client **contacts the server node to obtain metadata and locks**. . . . The server node communicates granted lock information and file metadata to the requesting client node, including the location of all datablocks making up the file. Once the client node holds a distributed lock and knows the data block location(s), the client node can access the data for the file directly from a shared storage device attached to the SAN.” (Guthridge at 1:19-27, emphasis added.) In the overview of the preferred embodiment, Guthridge teaches “[i]n a distributed file system, locks

are requested by client nodes and **granted by a server node.**” (Guthridge at 3:9-11, emphasis added.) “When a client node is granted a lock **from the server node**, the client node **establishes a lease with each server node** serving a file system in use by the client node. . . . A granted lock is valid as long as a client node **maintains a lease from the data server node that has granted the lock.**” (Guthridge at 3:16-22, emphasis added.) In describing the technical details for the invention, Guthridge teaches “[f]or each object in the filesystem on which a client obtains a lock, the server node creates an in-memory data structure, hereinafter referred to as the lock management object structure.” (Guthridge at 4:25-28.) The lock management object data structure is kept in the lock management cache on the sever node’s volatile memory. (Guthridge at 4:32-35.)

The system taught in Guthridge in which a client node must first contact a server node that grants a lock on the file for the client node and maintains a lock management data structure for the lock in the server’s volatile memory is not the same as the method of claim 1 which recites “the first computing entity attempting to obtain a lease for itself on the first data entity without needing another computing entity acting on its behalf” because the server node in Guthridge is needed to obtain the lock for the client node. Additionally, claim 1 recites reading and writing to “an owner field included in the file system.” An “owner field included in the file system” is not the same as a lock management data structure that is kept in volatile memory on a server node as taught by Guthridge.

Further, it is respectfully noted that in the 01/09/08 Office Action, the claim limitation “reading the owner field ” was mapped to the discussion in Guthridge of “a query is conducted to determine if a lock management data structure exists (Guthridge, column 4, lines 29-31, Fig. 3A, element 70).” (01/09/08 Office Action at 5). The claim limitation “writing to the owner field to indicate an assumption of a lease . . . ” was mapped to “if the lock management data structure does not exist, a new lock management data structure for the identified object is created (Guthridge, column 4, lines 33-35, Fig.3A, element 76), client node identifier associated with the lease (Guthridge, column 6, lines 57-58).” However, the process discussed in Guthridge at 3:29-33 describes the process used for a client to acquire a lease on a data object; whereas the “client node identifier associated with the lease” relates to the process for reasserting a lock on an expired lock lease. (Guthridge at 6:13-16.) Therefore, “if the lock management data structure does not exist, a new lock management data structure for the identified object is created

(Guthridge, column 4, lines 33-35, Fig.3A, element 76), client node identifier associated with the lease (Guthridge, column 6, lines 57-58)” is not the same as “writing to an owner field in the file system to indicate an assumption of a lease of the first data entity” as recited in claim 1. Additionally, because “the owner field” in the same element in both the limitation “reading the owner field” and the limitation “writing to the owner field,” mapping it to two different aspects of Guthridge is inconsistent.

For the reasons discussed above the present invention as recited in claim 1 is not the same as the system taught by Guthridge in which a server node is needed in order for a client to obtain a lease on a file. Therefore, it is believed that claim 1 is allowable. Claims 2-14 depend from claim 1, and are therefore, believed to be allowable for the reasons discussed above.

The system taught by Guthridge is also not the same as the method of claim 30 of the present invention which recites: “the first computing entity attempting to access a first data entity without needing another computing entity acting on its behalf.” As explained above, Guthridge requires that when a client node attempts to access a file, it must first contact a server node to obtain metadata and locks. Additionally, claim 30 recites reading and writing to “an owner field included in the file system.” An “owner field included in the file system” is not the same as a lock management data structure that is kept in volatile memory on a server node as taught by Guthridge.

Therefore, it is believed that claim 30 is allowable. Claims 31-39 depend from claim 30, and are therefore, believed to be allowable for the reasons discussed above.

New Claim

Claim 40 is new. Support for claim 40 can be found in the specification without limitation at P:0039 and Fig. 2.

Applicants submit that the present application is in condition for allowance. The Examiner is invited to contact the undersigned attorney at the below number to discuss any additional changes deemed necessary in light of the within Amendment.

Respectfully submitted,

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